

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. With this amendment, claims 1, 22, and 33 have been amended, claim 5 has been cancelled without prejudice or disclaimer of the subject matter recited in this claim, and no claims have been added. This amendment does not raise a new issue as claim 5 has already been examined. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier. Thus, claims 1-4, 6-17, 22-34, 36-38 and 41-45 remain pending in the application.

Support for the amendments to claims 1, 22, and 33 can be found in original claim 5. No new matter has been added.

Claim Rejections under 35 USC §103

Claims 1-2, 5-7, 9-10, 13-17, 33-34, 37-38, 42, 43-45 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mirkin et al. (US Patent Application Publication 2003/0211488 A1 November 13, 2003) in view of Ness et al. (US Patent 6,027,890 February 22, 2000). Claim 3-4, 8, and 36 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mirkin et al. (US Patent Application Publication 2003/0211488 A1 November 13, 2003) in view of Ness et al. (US Patent 6027890 February 22, 2000) as applied to claims 1-2, 5-7, 9-10, 13-17, 33-34, 37-38, 42, 43-45

and further in view of Mirkin et al. (US Patent 6361944 March 26, 2002) (referred to as Mirkin B). Claim 11 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mirkin et al. (US Patent Application Publication 2003/0211488 A1 November 13, 2003) in view of Ness et al. (US Patent 6,027,890 February 22, 2000) as applied to claims 1-2, 5-7, 9-10, 13-17, 33-34, 37-38, 42, 43-45 and further in view of Pastinen et al. (Genome Research July 2000 Vol. 10 (7) p. 1031). Claim 12 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mirkin et al. (US Patent Application Publication 2003/0211488 A1 November 13, 2003) in view of Ness et al. (US Patent 6027890 February 22, 2000) as applied to claims 1-2, 5-7, 9-10, 13-17, 33-34, 37-38, 42, 43-45 and further in view of Lane et al. (US Patent 5,770,365 June 23, 1998). Claims 22-24, 26-27, 29-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mirkin et al. (US Patent Application Publication 2003/0211488 A1 November 13, 2003) in view of Ness et al. (US Patent 6027890 February 22, 2000) and Chan et al. (US Patent Application Publication 2003/0059822 March 27, 2003) and Corbierre et al. (Journal of American Chem. Soc 2001 Vol. 123 p. 10411). Claim 25 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mirkin et al. (US Patent Application Publication 2003/0211488 A1 November 13, 2003) in view of Ness et al. (US Patent 6,027,890 February 22, 2000), Chan et al. (US Patent Application Publication 2003/0059822 March 27, 2003) and Corbierre et al. (Journal of American Chem. Soc 2001 Vol. 123 p. 1041 1) as applied to claims 22-24, 26-27, and 29-32 above and further in view of Bruchez, Jr. et al. (US Patent Application 09/181,558 March 21, 2002). Claim 28 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mirkin et al. (US Patent

Application Publication 20031021 1488 A1 November 13, 2003), Ness et al. (US Patent 6027890 February 22, 2000), Chan et al. (US Patent Application Publication 2003/0059822 March 27, 2003) and Corbierre et al. (Journal of American Chem. Soc 2001 Vol. 123 p. 1041 1) as applied to claims 22-24, 26-27, and 29-32 above and in view of Livak et al (US Patent 5723591 March 3, 1998). Applicants respectfully traverse the rejection.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). See also MPEP 2143.03. Claims 1, 22, and 33 have been amended to recite, *inter alia*, "wherein the positively charged Raman signal enhancer comprises a composite of organic-inorganic nanoparticles." This feature is neither taught nor suggested by Mirkin, Ness, Chan, Lane, Corbierre.

In rejecting original claim 5, the Examiner states:

Mirkin et al. teaches the positively charged Raman signal enhancer is a nanoparticle- Cy3-labeled alkylthiol capped oligonucleotide (Example 2, p. 10). This probe would be a composite of organic-inorganic nanoparticle (e.g. the oligonucleotide is organic and the Cy3 is **inorganic**). (Office action, page 4, lines 5-8)(Emphasis added).

The Examiner, however, is incorrect. While Mirkin does indeed teach that his Raman signal enhancer is a nanoparticle- Cy3-labeled alkylthiol capped oligonucleotide, CY3 is not **inorganic**. Cy3 is an organic fluorescent dye. (See the attached chemical structure taken from Wikipedia Cy3, Cy5 dye entry). Cy3 is organic, alkylthiol is organic and the oligonucleotide is organic. Thus, Mirkin teaches an organic-organic composite,

not "a composite of organic-inorganic nanoparticles" as recited in amended claims 1, 22, and 33. Applicants respectfully request withdrawal of the rejections.

Double Patenting Rejections

Claims 1-17, 22-34, 36-38, 41-45 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-4 of copending Application No. 11-414611.

Because the claims of both applications may be amended significantly during prosecution, Applicants respectfully request this rejection be held in abeyance pending the indication of allowable subject matter.

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance. The Director is authorized to charge any fees necessary and/or credit any overpayments to Deposit Account No. 03-3975, referencing Docket No. 043395-0377929.

Respectfully submitted,

Dated: August 11, 2009

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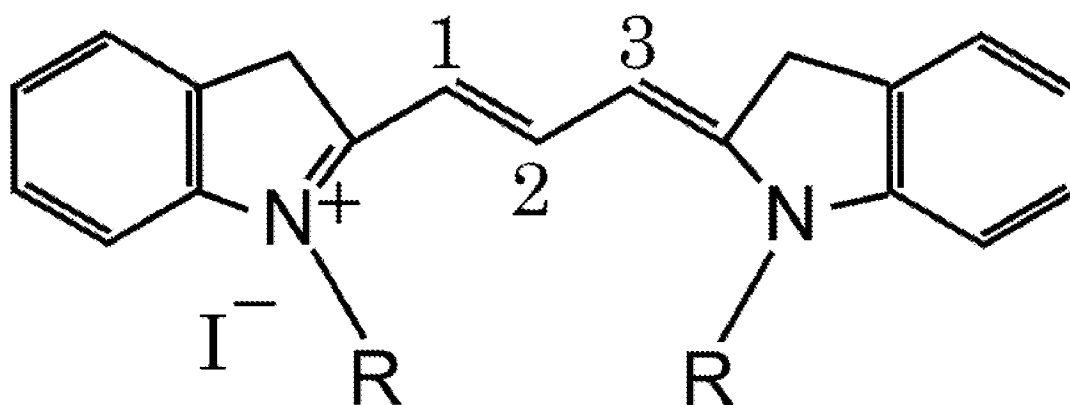
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- ATTACHMENT

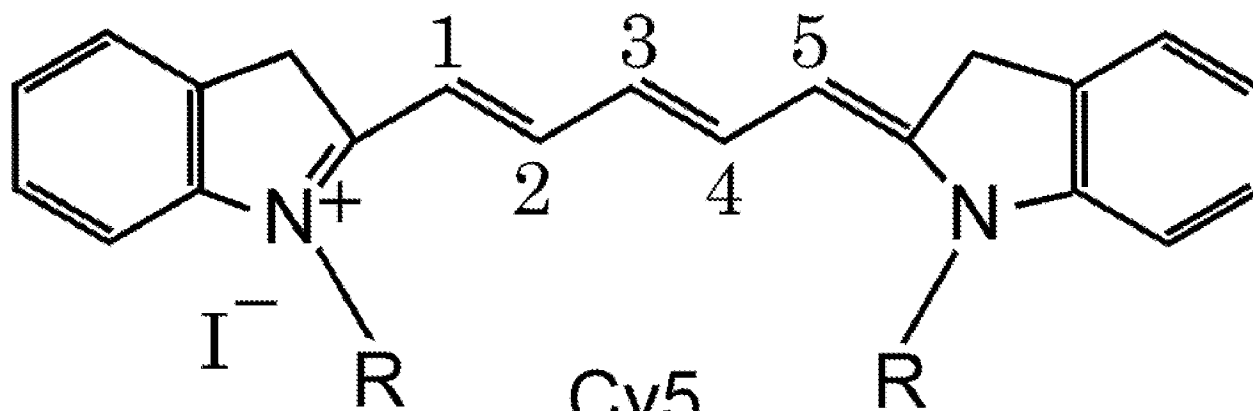
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Cy3



Cy5

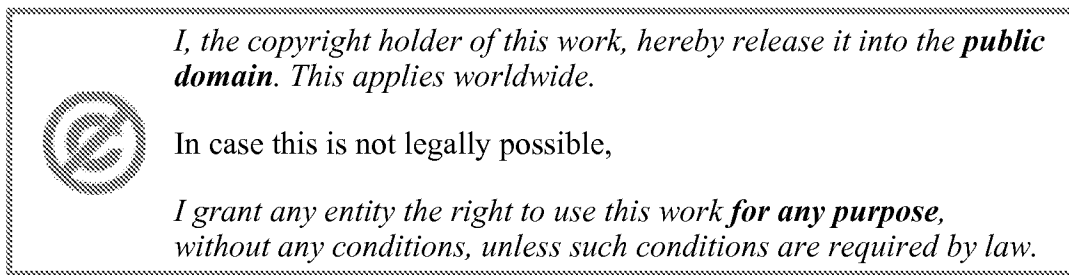
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